1644

#13

1600

RAW SEQUENCE LISTING DATE: 01/25/2002
PATENT APPLICATION: US/09/582,337 TIME: 11:56:57

Input Set : A:\Sequence.txt
Output Set: N:\CRF3\01252002\I582337.raw

3 <110> APPLICANT: Japan Tobacco, Inc.
5 <120> TITLE OF INVENTION: Monoclonal Antibody Against Connective Tissue Growth Factor
6 and Medicinal Uses Thereof
8 <130> FILE REFERENCE: J1-009PCT
C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/582,337
C--> 11 <141> CURRENT FILING DATE: 2000-06-23
13 <150> PRIOR APPLICATION NUMBER: JP P1997-367699
14 <151> PRIOR FILING DATE: 1997-12-25
16 <150> PRIOR APPLICATION NUMBER: JP P1998-356183
17 <151> PRIOR FILING DATE: 1998-12-15
19 <160> NUMBER OF SEQ ID NOS: 27
21 <170> SOFTWARE: PatentIn Ver. 2.0
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 2338
25 <212> TYPE: DNA
26 <213> ORGANISM: Rat
28 <220> FEATURE:
29 <221> NAME/KEY: 5'UTR
30 <222> LOCATION: (1)..(212)
32 <220> FEATURE:
33 <221> NAME/KEY: CDS
34 <222> LOCATION: (213)..(1256)
36 <220> FEATURE:
37 <221> NAME/KEY: 3'UTR
38 <222> LOCATION: (1257)..(2338)
40 <220> FEATURE:
41 <221> NAME/KEY: polyA_signal
42 <222> LOCATION: (2297)..(2302)
44 <400> SEQUENCE: 1

ENTERED

```
45 ctccaagaag actcagccag acccactcca gctccgaccc taggagaccg acctcctcca 60
47 gacggcagca gccccagccc agtggacaac cccaggagcc accacctgga gcgtccggac 120
49 accaacctcc gccccgagac cgagtccagg ctccggccgc gcccctcgtc gcctctgcac 180
51 cccgctgtgc gtcctcctgc cgcgccccga cc atg ctc gcc tcc gtc gcg ggt   233
52                                     Met Leu Ala Ser Val Ala Gly
53                                       1               5
55 ccc gtt agc ctc gcc ttg gtg ctc ctc ctc tgc acc cgg cct gcc acc   281
56 Pro Val Ser Leu Ala Leu Val Leu Leu Leu Cys Thr Arg Pro Ala Thr
57          10                  15                  20
59 ggc cag gac tgc agc gcg cag tgt cag tgc gca cgt gaa gcg gcg ccg   329
60 Gly Gln Asp Cys Ser Ala Gln Cys Gln Cys Ala Arg Glu Ala Ala Pro
61      25                  30                  35
63 cgc tgc ccc gcc ggc gtg agc ctg gtg ctg gac ggc tgc ggc tgc tgc   377
64 Arg Cys Pro Ala Gly Val Ser Leu Val Leu Asp Gly Cys Gly Cys Cys
```

RAW SEQUENCE LISTING DATE: 01/25/2002
PATENT APPLICATION: US/09/582,337 TIME: 11:56:57

Input Set : A:\Sequence.txt
Output Set: N:\CRF3\01252002\I582337.raw

```
65  40                  45                  50                  55
67 cgc gtc tgc gcc aag cag ctg gga gaa ctg tgc acg gag cgt gat ccc   425
68 Arg Val Cys Ala Lys Gln Leu Gly Glu Leu Cys Thr Glu Arg Asp Pro
69                60                  65                  70
71 tgc gac cca cac aag ggt ctc ttc tgc gac ttc ggc tcc ccc gcc aac   473
72 Cys Asp Pro His Lys Gly Leu Phe Cys Asp Phe Gly Ser Pro Ala Asn
73             75                  80                  85
75 cgc aag att ggc gtg tgc cct gcc aaa gat ggt gca ccc tgt gtc ttc   521
76 Arg Lys Ile Gly Val Cys Pro Ala Lys Asp Gly Ala Pro Cys Val Phe
77          90                  95                 100
79 ggt ggg tcc gtg tac cgc agc ggc gag tcc ttc caa agc agt tgc aaa   569
80 Gly Gly Ser Val Tyr Arg Ser Gly Glu Ser Phe Gln Ser Ser Cys Lys
81     105                 110                 115
83 tac cag tgc act tgc ctg gat ggg gcc gtg ggc tgt gtg ccc ctg tgc   617
84 Tyr Gln Cys Thr Cys Leu Asp Gly Ala Val Gly Cys Val Pro Leu Cys
85 120                 125                 130                 135
87 agc atg gac gtg cgc ctg ccc agc cct gac tgc ccc ttc ccg aga agg   665
88 Ser Met Asp Val Arg Leu Pro Ser Pro Asp Cys Pro Phe Pro Arg Arg
89                140                 145                 150
91 gtc aag ctg ccc ggg aaa tgc tgt gag gag tgg gtg tgt gat gag ccc   713
92 Val Lys Leu Pro Gly Lys Cys Cys Glu Glu Trp Val Cys Asp Glu Pro
93             155                 160                 165
95 aag gac cgc aca gtg gtt ggc cct gcc cta gct gcc tac cga ctg gaa   761
96 Lys Asp Arg Thr Val Val Gly Pro Ala Leu Ala Ala Tyr Arg Leu Glu
97          170                 175                 180
99 gac aca ttt ggc cct gac cca act atg atg cga gcc aac tgc ctg gtc   809
100 Asp Thr Phe Gly Pro Asp Pro Thr Met Met Arg Ala Asn Cys Leu Val
101     185                 190                 195
103 cag acc aca gag tgg agc gcc tgt tct aag acc tgt ggg atg ggc atc   857
104 Gln Thr Thr Glu Trp Ser Ala Cys Ser Lys Thr Cys Gly Met Gly Ile
105 200                 205                 210                 215
107 tcc acc cgg gtt acc aat gac aat acc ttc tgc agg ctg gag aag cag   905
108 Ser Thr Arg Val Thr Asn Asp Asn Thr Phe Cys Arg Leu Glu Lys Gln
109                220                 225                 230
111 agt cgt ctc tgc atg gtc agg ccc tgt gaa gct gac cta gag gaa aac   953
112 Ser Arg Leu Cys Met Val Arg Pro Cys Glu Ala Asp Leu Glu Glu Asn
113             235                 240                 245
115 att aag aag ggc aaa aag tgc atc cgg acg cct aaa att gcc aag cct   1001
116 Ile Lys Lys Gly Lys Lys Cys Ile Arg Thr Pro Lys Ile Ala Lys Pro
117          250                 255                 260
119 gtc aag ttt gag ctt tct ggc tgc acc agt gtg aag acc tac cgg gct   1049
120 Val Lys Phe Glu Leu Ser Gly Cys Thr Ser Val Lys Thr Tyr Arg Ala
121     265                 270                 275
123 aag ttc tgt ggg gtg tgc acg gac ggc cgc tgc tgc aca ccg cac aga   1097
124 Lys Phe Cys Gly Val Cys Thr Asp Gly Arg Cys Cys Thr Pro His Arg
125 280                 285                 290                 295
127 acc acc aca ctg ccg gtg gag ttc aag tgc ccc gat ggc gag atc atg   1145
128 Thr Thr Thr Leu Pro Val Glu Phe Lys Cys Pro Asp Gly Glu Ile Met
129                300                 305                 310
```

RAW SEQUENCE LISTING DATE: 01/25/2002
PATENT APPLICATION: US/09/582,337 TIME: 11:56:57

Input Set : A:\Sequence.txt
Output Set: N:\CRF3\01252002\I582337.raw

```
131 aaa aag aac atg atg ttc atc aag acc tgt gcc tgc cat tac aac tgt   1193
132 Lys Lys Asn Met Met Phe Ile Lys Thr Cys Ala Cys His Tyr Asn Cys
133             315                 320                 325
135 ccc ggg gac aat gac atc ttt gag tcc ttg tac tac agg aag atg tat   1241
136 Pro Gly Asp Asn Asp Ile Phe Glu Ser Leu Tyr Tyr Arg Lys Met Tyr
137         330                 335                 340
139 gga gac atg gcg taa agccagggag taagggacac gaactcattt agactataac   1296
140 Gly Asp Met Ala
141     345
143 ttgaactgag ttacatctca ttttcttctg taaaaaaaac aaaaagggtt acagtagcac 1356
145 attaatttaa atctgggttc ctaactgctg tgggagaaaa caccccaccg aagtgagaac 1416
147 cgtgtgtcat tgtcatgcaa atagcctgtc aatctcagac actggtttcg agacagttta 1476
149 gacttgacag ttgttcacta gcgcacagtg acagaacgca cactaaggtg agcctcctgg 1536
151 aagagtggag atgccaggag aaagacaggt actagctgag gtcattttaa aagcagcgat 1596
153 atgcctactt tttggagtgt gacaggggag ggacattata gcttgcttgc agacagacct 1656
155 gctctagcaa gagctgggtg tgtgtcctcc actcggtgag gctgaagcca gctattcttt 1716
157 cagtaagaac agcagtttca gcgctgacat tctgattcca gygacactgg tcgggagtca 1776
159 gaaccttgtc tattagactg gacagcttgt ggcaagtgaa tttgccggta acaagccaga 1836
161 tttttatgga tcttgtaaat attgtggata aatatatata tttgtacagt tatctargtt 1896
163 aatttaaaga cgtttgtgcc tattgttctt gttttaagtg cttttggaat ttttaaactg 1956
165 atagcctcaa actccaaaca ccatcgatag gacataaagc ttgtctgtga ttcaaaacaa 2016
167 aggagatact gcagtggaaa ctgtaacctg agtgactgtc tgtcagaaca tatggtacgt 2076
169 agacggtaaa gcaatggatc agaagtcaga tttctagtag gaaatgtaaa atcactgttg 2136
171 gcgaacaaat ggcctttatt aagaaatggc ttgctcaggg taactggtca gatttccacg 2196
173 aggaagtgtt tgctgcttct ttgactatga ctggtttggg aggcagttta tttgttgaga 2256
175 gtgtgaccaa aagttacatg tttgcacctt tctagttgaa aataaagtat atatattttt 2316
177 tatatgaaaa aaaaaaaaaa aa                                        2338
180 <210> SEQ ID NO: 2
181 <211> LENGTH: 347
182 <212> TYPE: PRT
183 <213> ORGANISM: Rat
185 <400> SEQUENCE: 2
186 Met Leu Ala Ser Val Ala Gly Pro Val Ser Leu Ala Leu Val Leu Leu
187   1               5                  10                  15
189 Leu Cys Thr Arg Pro Ala Thr Gly Gln Asp Cys Ser Ala Gln Cys Gln
190              20                  25                  30
192 Cys Ala Arg Glu Ala Ala Pro Arg Cys Pro Ala Gly Val Ser Leu Val
193          35                  40                  45
195 Leu Asp Gly Cys Gly Cys Cys Arg Val Cys Ala Lys Gln Leu Gly Glu
196      50                  55                  60
198 Leu Cys Thr Glu Arg Asp Pro Cys Asp Pro His Lys Gly Leu Phe Cys
199  65                  70                  75                  80
201 Asp Phe Gly Ser Pro Ala Asn Arg Lys Ile Gly Val Cys Pro Ala Lys
202                 85                  90                  95
204 Asp Gly Ala Pro Cys Val Phe Gly Gly Ser Val Tyr Arg Ser Gly Glu
205             100                 105                 110
207 Ser Phe Gln Ser Ser Cys Lys Tyr Gln Cys Thr Cys Leu Asp Gly Ala
208         115                 120                 125
210 Val Gly Cys Val Pro Leu Cys Ser Met Asp Val Arg Leu Pro Ser Pro
```

RAW SEQUENCE LISTING DATE: 01/25/2002
PATENT APPLICATION: US/09/582,337 TIME: 11:56:57

Input Set : A:\Sequence.txt
Output Set: N:\CRF3\01252002\I582337.raw

```
211     130                 135                 140
213 Asp Cys Pro Phe Pro Arg Arg Val Lys Leu Pro Gly Lys Cys Cys Glu
214 145                 150                 155                 160
216 Glu Trp Val Cys Asp Glu Pro Lys Asp Arg Thr Val Val Gly Pro Ala
217                 165                 170                 175
219 Leu Ala Ala Tyr Arg Leu Glu Asp Thr Phe Gly Pro Asp Pro Thr Met
220             180                 185                 190
222 Met Arg Ala Asn Cys Leu Val Gln Thr Thr Glu Trp Ser Ala Cys Ser
223         195                 200                 205
225 Lys Thr Cys Gly Met Gly Ile Ser Thr Arg Val Thr Asn Asp Asn Thr
226     210                 215                 220
228 Phe Cys Arg Leu Glu Lys Gln Ser Arg Leu Cys Met Val Arg Pro Cys
229 225                 230                 235                 240
231 Glu Ala Asp Leu Glu Glu Asn Ile Lys Lys Gly Lys Lys Cys Ile Arg
232                 245                 250                 255
234 Thr Pro Lys Ile Ala Lys Pro Val Lys Phe Glu Leu Ser Gly Cys Thr
235             260                 265                 270
237 Ser Val Lys Thr Tyr Arg Ala Lys Phe Cys Gly Val Cys Thr Asp Gly
238         275                 280                 285
240 Arg Cys Cys Thr Pro His Arg Thr Thr Thr Leu Pro Val Glu Phe Lys
241     290                 295                 300
243 Cys Pro Asp Gly Glu Ile Met Lys Lys Asn Met Met Phe Ile Lys Thr
244 305                 310                 315                 320
246 Cys Ala Cys His Tyr Asn Cys Pro Gly Asp Asn Asp Ile Phe Glu Ser
247                 325                 330                 335
249 Leu Tyr Tyr Arg Lys Met Tyr Gly Asp Met Ala
250             340                 345
253 <210> SEQ ID NO: 3
254 <211> LENGTH: 20
255 <212> TYPE: DNA
256 <213> ORGANISM: Artificial Sequence
258 <220> FEATURE:
259 <223> OTHER INFORMATION: Description of Artificial Sequence: Artificially
260       synthesized primer sequence
262 <220> FEATURE:
263 <221> NAME/KEY: primer_bind
264 <222> LOCATION: (1)..(20)
266 <400> SEQUENCE: 3
267 tgcggctgct gccgcgtctg                                              20
270 <210> SEQ ID NO: 4
271 <211> LENGTH: 21
272 <212> TYPE: DNA
273 <213> ORGANISM: Artificial Sequence
275 <220> FEATURE:
276 <223> OTHER INFORMATION: Description of Artificial Sequence: Artificially
277       synthesized primer sequence
279 <220> FEATURE:
280 <221> NAME/KEY: primer_bind
281 <222> LOCATION: (1)..(21)
```

RAW SEQUENCE LISTING DATE: 01/25/2002
PATENT APPLICATION: US/09/582,337 TIME: 11:56:57

Input Set : A:\Sequence.txt
Output Set: N:\CRF3\01252002\I582337.raw

```
283 <400> SEQUENCE: 4
284 gcacaggtct tgatgaacat c                                              21
287 <210> SEQ ID NO: 5
288 <211> LENGTH: 444
289 <212> TYPE: DNA
290 <213> ORGANISM: Homo sapiens
292 <220> FEATURE:
293 <221> NAME/KEY: CDS
294 <222> LOCATION: (1)..(444)
296 <220> FEATURE:
297 <221> NAME/KEY: sig_peptide
298 <222> LOCATION: (1)..(57)
300 <220> FEATURE:
301 <221> NAME/KEY: V_region
302 <222> LOCATION: (58)..(363)
304 <400> SEQUENCE: 5
305 atg gag ttt ggg ctg agc tgg att ttc ctt gct gct att tta aaa ggt   48
306 Met Glu Phe Gly Leu Ser Trp Ile Phe Leu Ala Ala Ile Leu Lys Gly
307   1               5                  10                  15
309 gtc cag tgt gag gtg cag ctg gtg gag tct ggg gga ggc ttg gta aag   96
310 Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys
311              20                  25                  30
313 cct ggg ggg tcc ctt aag acc tct cct gtg cag cct ctg gat tca act   144
314 Pro Gly Gly Ser Leu Lys Thr Ser Pro Val Gln Pro Leu Asp Ser Thr
315          35                  40                  45
317 ttc agt aac gcc tgg atg agc tgg gtc cgc cag gct cca gga agg ggc   192
318 Phe Ser Asn Ala Trp Met Ser Trp Val Arg Gln Ala Pro Gly Arg Gly
319      50                  55                  60
321 tgg agt ggg ttg gcc gta tta aaa gca aaa ctg atg gtg gga cac aca   240
322 Trp Ser Gly Leu Ala Val Leu Lys Ala Lys Leu Met Val Gly His Thr
323  65                  70                  75                  80
325 gac tac gct gca ccc gtg aaa ggc aga ttc acc atc tca aga gat gat   288
326 Asp Tyr Ala Ala Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp
327                  85                  90                  95
329 tca aaa aac acg ctg tat ctg caa atg aac agc ctg aaa acc gag gac   336
330 Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp
331              100                 105                 110
333 aca gcc gtg tat tac tgt acc aca aaa tgg gtg gct acg gac tac ttt   384
334 Thr Ala Val Tyr Tyr Cys Thr Thr Lys Trp Val Ala Thr Asp Tyr Phe
335          115                 120                 125
337 gac tac tgg ggc cag gga acc ctg gtc acc gtc tcc tca gcc tcc acc   432
338 Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr
339      130                 135                 140
341 aag ggc cca tcg                                                  444
342 Lys Gly Pro Ser
343 145
346 <210> SEQ ID NO: 6
347 <211> LENGTH: 148
348 <212> TYPE: PRT
```

VERIFICATION SUMMARY DATE: 01/25/2002
PATENT APPLICATION: US/09/582,337 TIME: 11:56:58

Input Set : A:\Sequence.txt
Output Set: N:\CRF3\01252002\I582337.raw

L:10 M:270 C: Current Application Number differs, Replaced Application Number
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date